CLAIMS: *Clean claim listing:*

1) (CURRENTLY AMENDED) System of entangled samples comprising at least one kind of excited isomer nuclides in which at least one said excited isomer nuclide has at least one metastable state that deexcites by emitting gamma rays, called hereafter deexcitation gamma rays, in which groups of two or several excited nuclei of the aforesaid excited isomer nuclides of the aforesaid samples, are entangled together and are distributed in whole or in part of the aforesaid samples, called thereafter by convention “entangled” samples, the aforementioned “entangled” samples being able to be separated in space and presenting quantum couplings between some of the excited nuclei of the aforesaid excited isomer nuclides contained in these separate samples.

2) (CURRENTLY AMENDED) System of entangled samples according to claim 1 in which said “entangled” samples comprises said excited nuclei of at least one kind of said excited isomer nuclides, having at least one said metastable state, chosen in the group of Niobium (93Nb41m), Cadmium (111Cd48m), Cadmium (113Cd48m), Cesium (135Ce55m), Indium (115In49m), Tin (117Sn50m), Tin (119Sn50m), Tellurium (125Te52m), Xenon (129Xe54m), Xenon (131Xe54m), Hafnium (178Hf72m), Hafnium (179Hf72m), Iridium (193Ir77m), or Platinum (195Pt78m), the aforementioned “entangled” samples being able to be moved over large distances and to wait long periods, if their half-life allows it, while being always likely to be deexcited.

3) (CURRENTLY AMENDED) System of entangled samples according to claim 1 in which said “entangled” samples are in any physical form or chemical form, for example the form of solids in sheet or powder, or the form of fluids or gases (for example case of Xenon), which contain a proportion of at least one or several aforesaid isomer nuclides, for example Niobium (93Nb41m), Cadmium (111Cd48m), Cadmium (113Cd48m), Cesium (135Ce55m), Indium (115In49m), Tin (117Sn50m), Tin (119Sn50m), Tellurium (125Te52m), Xenon (129Xe54m), Xenon (131Xe54m), Hafnium (178Hf72m), Hafnium (179Hf72m), Iridium (193Ir77m), Platinum (195Pt78m), or in the form of alloys, mixtures, or in the form of chemical compounds incorporating a proportion of one or several of the aforesaid excited isomer nuclides.

4) (CURRENTLY AMENDED) System of entangled samples according to claim 1 including said “entangled” samples, of which one at least is in a physical form and / or a chemical form different from the form of one or several other said “entangled” samples, for example one in the form of powder and the other in the form of a sheet, or one in the form of a solid, or in the form of powder or gas and the other incorporated in injectable carrying molecules for example, in salts or molecules put in solution.

5) (CURRENTLY AMENDED) Manufacturing process of a system of entangled samples comprising the following steps:

(a) one prepares together samples containing nuclei of at least one kind of isomer nuclides having at least one metastable state,

(b) one proceeds to the irradiation by means of gamma rays, at least partly entangled, of a sufficient energy to excite certain of the aforesaid nuclei of the aforesaid isomer nuclide to at least one metastable state, the said entangled gamma rays forming groups which are generated, for example, either by a source of gamma rays emitted in a cascade, or by a generator of gamma rays coming from the Bremsstrahlung of accelerated particles, the groups of said gamma rays, when they are entangled, exciting the corresponding said nuclei of the said isomer nuclides distributed in the said samples irradiated together and forming the separate “entangled” samples of the aforesaid system of entangled samples.

6) (CURRENTLY AMENDED) Method according to claim 5 in which one uses aforementioned “entangled” samples of which one at least has undergone a physical and / or a chemical transformation after the aforementioned irradiation.

7) (CURRENTLY AMENDED) Method of use of the system of entangled samples according to claim 1 comprising the following steps to control a remote deexcitation by employing some aforementioned “entangled” samples:

(a) one separates in space whole or part of said “entangled” samples of the aforesaid system of entangled samples containing some aforementioned excited nuclei of the aforesaid excited isomer nuclide presenting some quantum couplings, certain of the aforesaid excited nuclei of the aforesaid excited isomer nuclide being distributed on some of these said “entangled” samples,

(b) one exploits said quantum couplings between said excited nuclei of certain of the said “entangled” samples of the aforesaid system of entangled samples, independently of the distances, mediums separating them and independently from the mediums in which these said “entangled” samples are located:

(i) by causing at least a modulated stimulation of the deexcitation of the aforesaid excited isomer nuclides, by X-ray or gamma irradiation, for example obtained by means of a source of Iron 55, within at least one of the aforesaid “entangled” samples, qualified as “entangled” “master” sample, the said modulated stimulation inducing, by means of the aforesaid quantum couplings, a remote deexcitation of one or more of the other aforesaid “entangled” samples, qualified as “entangled” “slave” samples; the aforesaid modulated stimulation applied to said “master” sample denoting at least one information or at least one control to be transmitted,

(ii) and, either by determining, either at least one detection of information, or at least one detection of remote control, by means of at least one measurement made with a detector of gamma radiation, of at least an additional modulated deexcitation of at least one characteristic line of at least one aforesaid isomer nuclide contained in at least one of the other aforesaid “entangled” “slave” samples, or by using the gamma radiation resulting from the additional modulated deexcitation from at least one aforesaid isomer nuclide contained in at least one of the other aforesaid

"entangled" "slave" samples, as a local control, or by using at least one of the other aforesaid "entangled" "slave" samples, as a product of which the radiation is operated by remote control from the aforesaid "entangled" "master" sample to irradiate the environment of the said "entangled" "slave" sample, or a combination of these exploitations.

8) (CURRENTLY AMENDED) Method of use according to claim 7 in which one employs aforementioned "entangled" samples containing aforementioned excited nuclei of at least two aforementioned isomer nuclides, whose gamma response of at least one said "entangled" "slave" sample either is measured, or is used to irradiate its environment.

9) (CURRENTLY AMENDED) Method of use according to claim 7 in which one employs aforementioned "entangled" samples containing aforementioned excited nuclei of at least one aforementioned isomer nuclide, of which the gamma response is made up of a plurality of lines from which at least two lines are measured simultaneously, for example to improve the signal to noise ratio during the measurement carried on the aforementioned "entangled" "slave" sample or on the aforementioned "entangled" "slave" samples.

10) (CURRENTLY AMENDED) Method of use according to claim 7 in which the aforementioned modulated stimulation is specified in amplitude on at least one aforementioned "entangled" "master" sample.

11) (CURRENTLY AMENDED) Method of use according to claim 7 in which the aforementioned modulated stimulation is specified in time on at least one aforementioned "entangled" "master" sample.

12) (CURRENTLY AMENDED) Complex product comprising a plurality of systems of entangled samples according to claim 1 in which at least two "entangled" samples from at least one said system of entangled samples are laid out in relation to each other on at least two supports, for example disks, called thereafter by convention "entangled" supports, for example by positioning an "entangled" sample of several systems of "entangled" samples on each one of the aforesaid supports according to a defined order.

13) (CURRENTLY AMENDED) Device of implementation of the process according to claim 5 for the manufacture of the complex product comprising a plurality of systems of entangled samples in which at least two “entangled” samples from at least one said system of entangled samples are laid out in relation to each other on at least two supports, for example disks, called thereafter by convention “entangled” supports, said device comprising at least an apparatus of excitation applying said process successively two or several times, at least two or several said systems of “entangled” samples being distributed on two or more supports, the “entangled” supports, according to the optimization of the apparatus of excitation.

14) (CURRENTLY AMENDED) Device of implementation of the method of use according to claim of use 7 applied to a complex product comprising a plurality of systems of entangled samples, in which at least two “entangled” samples from at least one said system of entangled samples are laid out in relation to each other on at least two supports, for example disks, called thereafter by convention “entangled” supports, characterized in that it includes at least one of the following apparatuses, insofar as it is intended to implement whole or part of the method of use, object of the aforesaid claim of use, located within the place covered by this patent, including aircrafts, marine vessels, submarines and spacecrafts, and the terrestrial, marine and space probes:

(a) one or several apparatuses for the aforementioned modulated stimulation, the “quantum transmitters”, applied to at least one of the aforementioned “entangled” samples, the “entangled” “master” sample, of at least one the aforementioned set of “entangled” samples pertaining to at least one of the aforementioned “entangled” supports, deexciting by X or gamma stimulation, one or several of the said “entangled” “masters” samples,

(b) one or several apparatuses of detection, the “quantum receivers”, for measuring quasi-simultaneously with the action of at least one of the aforesaid apparatuses for modulated stimulation, a gamma radiation coming from an additional modulated deexcitation on at least one characteristic line of at least one aforementioned isomer nuclide contained in at least one of the other aforementioned “entangled” samples, the “entangled” “slave” sample, of at least one the aforementioned set of “entangled” samples pertaining to at least one of the other aforementioned “entangled” supports, and in that this

additional measured modulated deexcitation, is used to determine the reception of at least one information or to activate at least a command upon the remote control coming from the apparatus of stimulation.

15) (CURRENTLY AMENDED) Device of implementation according to claim 13 in which the aforementioned "entangled" samples of one or more aforementioned systems of "entangled" samples are laid out on at least two aforementioned supports in the aforementioned apparatus of excitation, at least two of these said supports, the "entangled" supports, being thereafter separated for the utilization.

16) (CURRENTLY AMENDED) Device of implementation according to claim 13 in which one uses only one aforementioned support for the aforementioned sets of samples to be entangled together, before their divisions, in the aforementioned apparatus of excitation, the said samples of each set, once "entangled", being the subject of a division on at least two supports, the aforementioned "entangled" supports.

17) (CURRENTLY AMENDED) Device of implementation according to claim 14 in which at least two of the aforementioned "entangled" supports are positioned in relation to each other, for example in synchronous relation, in the aforementioned apparatus or apparatuses of modulated stimulation, and in the aforementioned apparatus or apparatuses of detection, in such way that on at least one aforesaid "entangled" support, at least one aforementioned "entangled" slave sample is measured by at least one said apparatus of detection, when at least one aforementioned "entangled" "master" sample of the same aforementioned set of "entangled" samples located on one of the other aforementioned "entangled" supports is stimulated in at least one said apparatus of modulated stimulation.

18) (CURRENTLY AMENDED) Device of implementation according to claim 14 in which aforementioned sets of "entangled" samples are arranged according to a defined order allowing the transmission and the reception of complex messages.

19) (CURRENTLY AMENDED) Method of use according to claim 7 to remotely transmit information, in particular emergency signals, remote controls, data acquisition, in mines, or sea-beds, in particular by means of robots and submarines, or in drillings, or in outer space, in particular at very long distances.

20) (UNCHANGED) Product according to claim 1 for medical use in order to irradiate an organ in which at least an aforementioned “entangled” sample is laid out near or in the aforesaid organ, by causing a remote stimulation by means of at least one other aforementioned “entangled” sample.

21) (UNCHANGED) Device of implementation of the method of use according to claim 7 for usage as a commercial kit of demonstration of whole or part of the method of use covered by the aforesaid claim.

22) (UNCHANGED) Method of use according to claim 7 in which at least one kind of aforementioned excited isomer nuclides is chosen within the group of Niobium (93Nb41m), Cadmium (111Cd48m), Cadmium (113Cd48m), Cesium (135Ce55m), Indium (115In49m), Tin (117Sn50m), Tin (119Sn50m), Tellurium (125Te52m), Xenon (129Xe54m), Xenon (131Xe54m), Hafnium (178Hf72m), Hafnium (179Hf72m), Iridium (193Ir77m), or Platinum (195Pt78m).

23) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Niobium (93Nb41m).

24) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Cadmium (113Cd48m).

25) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Indium (115In49m).

26) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Tin (117Sn50m).

27) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Tin (119Sn50m).

28) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Tellurium (125Te52m).

29) (UNCHANGED) Method of use according to claim 22 in which at least one kind of aforementioned excited isomer nuclides is Hafnium (178Hf72m).

30) (CURRENTLY AMENDED) Method of use according to claim 7 in which the system of entangled samples have been manufactured by a process comprising the following steps:

(a) one prepares together samples containing nuclei of at least one kind of isomer nuclides having at least one metastable state,

(b) one proceeds to the irradiation by means of gamma rays, at least partly entangled, of a sufficient energy to excite certain of the aforesaid nuclei of the aforesaid isomer nuclide to at least one metastable state, the said entangled gamma rays forming groups which are generated, for example, either by a source of gamma rays emitted in a cascade, or by a generator of gamma rays coming from the Bremsstrahlung of accelerated particles, the groups of said gamma rays, when they are entangled, exciting the corresponding said nuclei of the said isomer nuclides distributed in the said samples irradiated together and forming the separate "entangled" samples of the aforesaid system of entangled samples.

31) (UNCHANGED) Method of use according to claim 30 in which at least one kind of aforementioned excited isomer nuclides is chosen within the group of Niobium (93Nb41m), Cadmium (111Cd48m), Cadmium (113Cd48m), Cesium (135Ce55m), Indium (115In49m), Tin (117Sn50m), Tin (119Sn50m), Tellurium (125Te52m), Xenon (129Xe54m), Xenon (131Xe54m), Hafnium (178Hf72m), Hafnium (179Hf72m), Iridium (193Ir77m), or Platinum (195Pt78m).

32) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Niobium (93Nb41m).

33) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Cadmium (113Cd48m).

34) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Indium (115In49m).

35) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Tin (117Sn50m).

36) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Tin (119Sn50m).

37) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Tellurium (125Te52m).

38) (UNCHANGED) System of entangled samples according to claim 2 in which at least one kind of aforementioned excited isomer nuclides is Hafnium (178Hf72m).

39) (UNCHANGED) Method of manufacturing according to claim 5 in which at least one kind of aforementioned isomer nuclides is chosen within the group of Niobium (93Nb41m), Cadmium (111Cd48m), Cadmium (113Cd48m), Cesium (135Ce55m), Indium (115In49m), Tin (117Sn50m), Tin (119Sn50m), Tellurium (125Te52m), Xenon (129Xe54m), Xenon (131Xe54m), Hafnium (178Hf72m), Hafnium (179Hf72m), Iridium (193Ir77m), or Platinum (195Pt78m).

40) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Niobium (93Nb41m).

41) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Cadmium (113Cd48m).

42) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Indium (115In49m).

43) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Tin (117Sn50m).

44) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Tin (119Sn50m).

45) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Tellurium (125Te52m).

46) (UNCHANGED) Method of manufacturing according to claim 39 in which at least one kind of aforementioned excited isomer nuclides is Hafnium (178Hf72m).